History and Background

In 1975, cognizant safety and health personnel at the U.S. Department of Energy (DOE) Headquarters (HQ) met to discuss the need for a DOE hoisting and rigging manual. At that meeting, existing, applicable hoisting and rigging codes, standards, and regulations, such as the Occupational Safety and Health Administration (OSHA) 29 CFR 1910, the American National Standards Institute (ANSI) B-30 series, and others, were reviewed in detail. Subsequently, it was determined that these documents, while adequate as minimum general industry standards, did not contain the detail necessary to adequately accomplish the extremely complex, critical, and hazardous hoisting and rigging operations being performed at DOE sites, in all probability, at other government agency and private sectors throughout the country. Because of the high potential for accidents that could result in significant property loss or serious personnel injury or death, it was decided that a DOE hoisting and rigging manual was not only desirable but absolutely necessary.

Preliminary work on the manual was initiated in 1976. The manual that was developed at that time incorporated the minimum requirements of OSHA, ANSI, and similar documents and also included additional more stringent requirements deemed necessary to adequately control hoisting and rigging work processes throughout DOE. Each phase of the manual was then critically reviewed by DOE and contractor personnel. A final draft was completed in 1978 and implemented on a trial basis.

In June 1980, a decision was made to formally issue and distribute the manual under controlled distribution, an arrangement where the manual must be specifically requested from the originating source; however, once requested, updates are automatically received through an actively maintained distribution list. In 1982, the manual was included as a reference standard in DOE 5480.4, “Environmental Protection, Safety, and Health Protection Standards.” Updates and improvements have been made over the years on an approximately annual basis. Revisions have occurred in 1984, 1985, 1986, 1988, 1989, 1993, 1995, and 1996 to clarify intent, comply with OSHA and ANSI B-30 changes, improve format, strengthen wording, delete needless redundancy, eliminate obsolescence, and the like. Prior to inclusion in the manual, all changes must be approved by the DOE Hoisting and Rigging Committee, which meets semi-annually, and by the Headquarters Office of Occupational Safety and Health Policy, which has safety responsibility for DOE hoisting and rigging. The Committee is also a major source for input into the manual, particularly concerning those areas that are not defined or are only generally defined by Federal and national standards, such as training and qualification, and those concerning the DOE's unique operational environment, such as hoisting and rigging over nuclear reactors and other locations containing critical equipment. In the years that minor revisions occur, only the changed pages, usually 8 to 10, are sent to individuals on the distribution list. After two to three such supplements, the manual is reissued in its entirety, which incorporates the previous supplements plus the most recent unpublished changes approved by the committee. An example is the complete revision issued in 1993 followed by another complete revision in 1995, without any intervening supplements. In this case, the supplements were omitted because of the numerous improvements incorporated within the very short time period. Some of the most notable changes in the current standard include:

1. Full compliance with OSHA and ANSI requirements, with the OSHA requirements having priority where conflicts exist.

2. Expansion of Chapter 6 to include greater detail on qualifications for a larger number of positions. Criteria to be evaluated in training programs have likewise been expanded, enabling sites to tailor training programs to their particular characteristics.

3. The complete reformatting of each section into major equipment categories so that the handbook is easier to use.

4. The use of double-column format along with a slightly larger font size which improves readability. The double-column format has the added advantage of placing figures and tables closer to their referencing text.

5. Labeling of the side-by-side good practice, bad practice drawings so that the information being conveyed is immediately apparent. Also, in some cases portions of drawings containing key information, such as hand signals, finger positions were difficult to discern. These have been retouched.

6. This document contains many common element requirements which differ slightly in wording when applied to a specific equipment type. These differences have been compared, and whenever appropriate, the most comprehensive (and clearest) wording has been used.

7. To improve readability, the writing style has been changed to the active voice, which reduces, to some extent, the use of the word "shall," indicating a mandatory requirement. The reader should note that the use of the active (imperative) voice, such as "ensure that, check for, use only," indicates a mandatory requirement even if the word "shall" is not present in the sentence.

8. The reissued June '95 edition marked a change in classification. The DOE Office of Scientific and Technical Information (OSTI) reclassified the manual as a handbook and was issued as DOE Hoisting and Rigging Handbook (DOE-HDBK-1090-95). After further review, OSTI has reclassified the handbook as a DOE Technical Standard and the September 1996 edition is now issued as DOE STANDARD HOISTING AND RIGGING (Formerly Hoisting and Rigging Manual), DOE-STD-1090-96 (Rev-1).

While *The Hoisting and Rigging Standard* is in itself a best practice document, much of its content, such as the OSHA, ANSI/ASME, and Crane Manufacturers Association of America standards, is mandatory within DOE. In addition, many DOE organizations have, on their own initiative, adopted the standard as mandatory to ensure safe and proper hoisting and rigging operations at their facilities. Whether mandatory or not, the standard is and will continue to be the standard by which the excellence of DOE hoisting and rigging programs are judged.